#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization International Bureau





## (43) International Publication Date 24 August 2006 (24.08.2006)

# (10) International Publication Number WO 2006/088743 A3

(51) International Patent Classification: E21B 43/10 (2006.01) E21B 4/18 (2006.01) E21B 47/00 (2006.01) E21B 47/10 (2006.01)

(21) International Application Number:

PCT/US2006/004809

- (22) International Filing Date: 9 February 2006 (09.02.2006)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/652,564

14 February 2005 (14.02.2005) U

(71) Applicant (for all designated States except US): ENVENTURE GLOBAL TECHNOLOGY, L.L.C. [US/US]; 15995 North Barkers Landing, Suite 350, Houston, Texas 77079 (US).

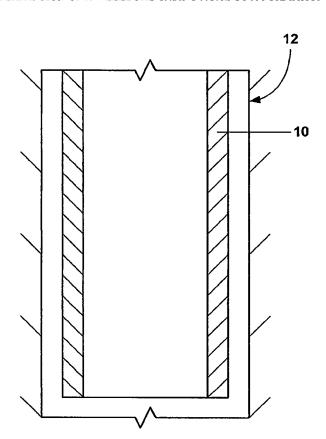
(72) Inventor; and

(75) Inventor/Applicant (for US only): COSTA, Scott [US/US]; 2011 Willow Point, Kingwood, Texas 77330 (US).

- (74) Agents: HAYNES AND BOONE, LLP et al.; 901 Main Street, Suite 3100, Dallas, Texas 75202 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: RADIAL EXPANSION OF A WELLBORE CASING AGAINST A FORMATION



(57) Abstract: Radial expansion of a wellbore casing against a formation.

<u>14</u>

### Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 19 October 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

### INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/04809

A. CLASSIFICATION OF SUBJECT MATTER IPC: E21B 43/10( 2006.01),47/00( 2006.01) E21B 4/18( 2006.01),47/10( 2006.01)			
USPC: 166/381,384,207,212 According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols)  U.S.: 166/381,384,207,212,250.08,243			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where a		Relevant to claim No.
Х	US 5,348,095 A (Worrall et al) 20 September 1994 (2	20.09.1994), see entire document.	1 and 15
х	US 5,031,699 A (Artynov et al.) 16 July 1991 (16.07.1991), see entire document.		1, 4-7, 15 and 18-21
х	US 4,976,322 A (Abdrakhmanov et al.) 11 December 1990 (11.12.1991), see column 4, lines 1-8.		1, 4-7, 15 and 18-21
Further	documents are listed in the continuation of Box C.	See patent family annex.	
Special categories of cited documents:		"T" later document published after the international filing date or priority	
"A" document	defining the general state of the art which is not considered to be of	date and not in conflict with the applica principle or theory underlying the inven	
particular "E" earlier app	relevance plication or patent published on or after the international filing date	"X" document of particular relevance; the cl considered novel or cannot be considere when the document is taken alone	aimed invention cannot be ed to involve an inventive step
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means		"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combi	
		with one or more other such documents obvious to a person skilled in the art	, such combination being
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family	
Date of the ac	ctual completion of the international search	Date of mailing of the international searc	h report
19 June 2006 (19.06.2006) <b>29</b> AUG 2006			115 2006
Name and mailing address of the ISA/US  Mail Stop PCT, Attn: ISA/US		Authorized officer D. Wildermith David J Bagnell	
Commissioner for Patents P.O. Box 1450			
Ale	xandria, Virginia 22313-1450	Telephone No. 571-272-3600	
Facsimile No	Facsimile No. (571) 273-3201		

Form PCT/ISA/210 (second sheet) (April 2005)